

COLONIAL NEWSLETTER

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● RF-49 APPEARS ●

● ● The NOVA CONSTELLATIO PATTERN "Five" ● ●



Enlarged 2X

Photograph courtesy John J. Ford, Jr.



Sequential page 702

The NOVA CONSTELLATIO PATTERN "Five" APPEARS**(RF-49A)**

- Photograph from John J. Ford, Jr.
Comment by ye Editor.

In the April 1973 issue of CNL (CNL No. 37, p.400) we published RF-49 quoting Sylvester S. Crosby from his Early Coins of America (page 312) -- who in turn was quoting from a May 15, 1784 entry in the diary of Samuel Curwen -- and we asked "where is this 'Five' piece today? It is probably of copper and may be resting in some collection as a regular NOVA."

CNL Patron John J. Ford, Jr. has now brought this specimen into the light of day from its hidingplace in a "French collection of British colonial coins." The story of the discovery together with a detailed and facinating discussion of its history appeared in the January 2, 1980 of COIN WORLD.

Curwen's journals and his correspondance files of 1775 to 1784 were, with biographical notes, assembled and published in 1842 by George A. Ward, and we assume that Crosby, in 1874, was quoting from Ward's compilation. It would be very interesting to see the statement relative to this piece in Curwen's own handwriting -- and thereby complete the initial documentation on this subject. Does anyone know where Curwen's original diary, journals and correspondance are located today?

**New Jersey 8-F Discovery****(TN-88)**

- from James H. Goudge; Canoga Park, California

I would like to report the discovery of another specimen of New Jersey Maris 8-F, the exceedingly elusive date under draw bar type. This was discovered at the Long Beach Coin and Stamp Exposition in February 1979. Unfortunately - it is a low grade specimen, the date is not visible and the entire coin is double struck, neither strike well centered, particularly on the obverse. Its weight is 127.5 grains. The attribution has been confirmed by Richard Picker.

Editor's Note: How many 8-F are known today? We know of the Johns Hopkins specimen, the Maris plate specimen now in a private collection, and this makes a third specimen. Are there others?



That "BOSTON" Half Penny

(TN-84A)

● Comment by David Gladfelder

Richard Margolis
David P. McBride
Eric P. Newman
& ye Editor

The Boston Half Penny illustrated in TN-84 (CNL #55, p.685) is of English origin. It is listed in the Williamson revision of Boyne Trade Tokens of the Seventeenth Century as being from Boston, Lincolnshire, England:

BOSTON.

15. O. A . BOSTON . HALF . PENY . TO . BE = The Arms of the town of Boston ; three ducal coronets in pale.

R. CHAINGED . BY . Y^E . OVERSERS = On a woolpack a ram couchant. ½

In the Boston corporate books, October 4, 1667, is this entry :

Mathew Browne ordered to send for £20 of brass or copper halfpence to be made use of, and to be current in the borough.

The arms of the borough of Boston as allowed and confirmed December 1, 1568, by Robt. Cook, Clarencieux, are sable, three ducal coronets in pale, or. Crest, on a woolpack, a ram couchant, or. Supporters, two mermaids, ppr., ducally crowned, or.

This information would seem to conclusively place the token in question as being issued in Lincolnshire about 1667. The fact that the specimen illustrated in CNL was found in the Taunton, Mass. area piques one's curiosity and invites research into Boston, Mass. records and archives to determine a possible "American Connection", but -- the finding of the piece near Boston, Mass. must be coincidental.

There are twenty two tokens from "Boston" listed in Boyne/Williamson!

Editor's Note: This Boston Half Penny was well known to four of our Patrons. I suspect that most of the others (including ye Editor) had never heard of it or seen an illustration. There were literally hundreds of tokens produced in England during the seventeenth and eighteenth centuries that could be mistaken as being of American origin. Even today a number of these are actively collected as "American". For example: the Kentucky Token (See Dalton & Hamer - Lancashire #59) and a number of "Washington" series tokens (See Dalton & Hamer - Middlesex # 242, 243, 244, & 245), as well as the well known AUCTORI PLEBIS (See CNL No. 43, p.475 ff). It is important, I believe, to be aware of these specimens and their apparent relationships to those of true American origin. Furthermore -- many of the early references on tokens, i.e. Atkins, Boyne and others contain no illustrations, only narrative descriptions as above, and that in itself creates difficulty with accurate identification. Perhaps one of our Patrons would like to compile for us a tabulation of known Early American tokens as well as those of non-American origin that are collected today with a listing of appropriate reference material.

Banana Nose Satirical Halfpenny**(TN-89)**

● from David P. McBride; Frisco, Colorado

The two coppers illustrated in TN-86 (CNL No. 55, p.686) bring to mind a halfpenny that I picked up in the Spring of 1978. I call this a Banana Nose satirical halfpenny. It is dated either 1770 or more probably 1772 the 2 very weak. The satirical intent is pure speculation; more likely it is just the crude work of an inexperienced die sinker. A 1.5X enlargement is shown below.



Metal: copper

Weight: 9.1 grams

Diameter: 28 mm

A number of things are reversed from an actual George III halfpenny:

- a. G's in GEORGIUS are upside down facing off coin.
- b. GEORGIUS is on the right instead of left.
- c. Obverse bust faces left instead of right.
- d. Reverse figure of Britannia faces right instead of left.
- e. BRITANIA reversed, BRITAN on right, IA on left.

Besides the upside-down G's and the reversals, there are what seem to be satirical elements:


- a. The nose is huge, like Banana nose, and seems to be indicative of caricature.
- b. The facial components, lips (puckered) and eye (bulging), are ugly; the chin is weak.
- c. The head is hairless, the ribbon crude.
- d. The wreath is a mere three scrawny twigs above head.
- e. There is no clothing on the body.
- f. This George is unidentified by number, i.e. (II, III), perhaps meant to be an insult which robs identity.

● **AN INFORMAL SURVEY of THREE CONNECTICUT COPPERS**
from Donn Pearlman; Skokie, Illinois

(TN-90)

The purpose of my survey was to satisfy the growing curiosity of an inquisitive collector, and in the process, attempt to compile a recent listing by condition of extant pieces of three key varieties of the Connecticut Coppers series in a perhaps less-than-scientific, but more-than-random manner. To get a ballpark answer to the question "How many of them are there?"

VARIETIES INVOLVED:

- | | |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Miller 6-K of 1786 | The reverse has three sets of four-dash ornaments (). |
| Miller 9-R of 1787 | The reverse date is a corrected blunder, 1787/8. Legend reads IND ET LIB. |
| Miller 12-Q of 1787 | Another blundered overdate, 1787/1877. |

METHODOLOGY:

An informal survey was mailed in the Fall of 1978 to all members of Early American Coppers, Inc. (EAC) as part of a regular issue of the group's publication, "Pennywise." The same questionnaire was mailed to Patrons of The Colonial Newsletter (CNL) as a supplement to a regular issue of CNL.

Individual questionnaires were mailed to the curators of the museums at the American Numismatic Association, the American Numismatic Society, the Smithsonian Institution and to several prominent dealers of "Colonial" U.S. coins. Various recent auction catalogs and dealer's fixed-price lists also were examined.

Great care was taken not to duplicate listings, to determine that one coin was not counted twice, or two coins mistakenly counted as only one specimen. This was done by tracing pedigree (when possible) and dates that specific coins were acquired by the 18 individual collectors and institutions responding to the survey.

Delays in completing the project included an unscheduled eight-week hiatus to battle the "Blizzard of '79" and the frequent necessity of the enthusiastic surveyor to leave his house and earn a living. Also, on more than one occasion, while in deep concentration on the materials spread over his desk at home, the above surveyor's five-year old son would enter the room holding a newly-acquired nickel or dime asking: "Is this one you need, Daddy?"

Miller 6-K of 1786 --- Summary of Findings

I was able to track down a total of 20 different pieces, only six of them in Fine or better condition and most with the commonly-found, weakly struck date. Two specimens are reported in Very Fine condition, one with a strongly struck date. According to one survey respondent, this variety has been listed at least 16 times in auctions from 1920 through 1978. The 1975 EAC/Pine Tree catalog lists this variety as "high R-6" with Pine Tree's R-6 defined as approximately 13 to 20 known. Other rarity scales define R-6 as 13 to 30 known. The EAC/Pine Tree value of 13 to 20 is believed to be a misprint.



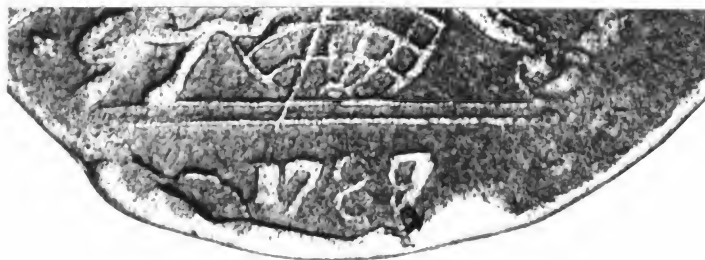
**DETAIL of FOUR-DASH ORNAMENT
AND UNIQUE HAIRDO**

Miller 9-R of 1787 --- Summary of Findings

Perhaps surprisingly, a total of 22 separate specimens of this "very scarce" variety were located including four in Very Fine condition, one listed as Very Fine/Extra Fine, and another listed as Extra Fine. One of the Very Fine specimens, examined by the surveyor via color photograph, is a most pleasing tan color and sharply double struck!

On the lower end of the grading scale, eight specimens of 9-R of 1787 are listed as Good or Very Good. Even on the lower grading spectrum most overdates were reported sharp and clear.

The 1975 EAC/Pine Tree auction catalog lists this variety as "low R-7" with R-7 defined as approximately only 4 to 12 known. As one of the catalogers candidly remarked when asked about the obvious disparity between the 22 extant pieces located in the survey and the R-7 catalog designation: "I guess you could say some of the rarity estimates were a little exaggerated."



Miller 12-Q of 1787 --- Summary of Findings

In a recent auction catalog a specimen of this overdate variety was listed as "XF-45 Finest Known." One of the respondents to this survey, a very familiar name in the field but which will not be divulged -- anonymity was promised to all participants -- pointed out that he personally owned a 12-Q of 1787 that he described as being in Almost Uncirculated condition; by definition, in a higher grade than the "XF-45 Finest Known" described in the above auction catalog.

Now, either the respondent overgraded his own specimen when he possessed it (during the early 1960's), or the auction cataloger undergraded that very same coin while describing it in the auction catalog. OR - there are indeed two distinct and separate specimens here, one sold at the recent auction and described perhaps accurately as XF (but not the finest known) and the other specimen sold in the early 1960's which is apparently the finest known as far as this informal survey is concerned (but not available for actual inclusion in the survey count because the current unknown owner has not responded to the questionnaire).

A total of 22 separate specimens of 12-Q of 1787 overdate variety were tracked down. Six of them in Very Fine condition or better. Several of the higher grades exhibit planchet or die problems.

The 1975 EAC/Pine Tree catalog listed the 12-Q of 1787 as "R-6" with R-6 defined as approximately 13 to 20 known; again, others define that rarity as 13 to 30 known.



CONCLUSIONS:

This was by no means a definitive study, just an attempt by one collector to personally learn more about a fascinating numismatic subject. However, this outline of known pieces should give an indication of condition census at least among coins held by knowledgeable collectors and by institutions; it may therefore be of some value in assessing the actual scarcity of these varieties in higher grades. It also proves some errors in the rarity estimates stated in the popular and otherwise informative 1975 EAC/Pine Tree auction catalog.

To those collectors, curators, and dealers who participated in the survey -- -- and permitted me to vicariously peer into their cabinets -- a most sincere "Thank You."

There are a few questions left unanswered: How many of these three interesting varieties of Connecticut Coppers are reposing, still unattributed and unaccounted for, in various collections and estates? How many were used as trinkets, are now in junk jewelry or common coppers boxes? Or, how many were used as planchets for striking of, say, New Jersey Coppers during the years of private enterprise coinage during the late 1780's?

A final thought --- Referring to my love of Connecticut Coppers, a prominent and reputable Chicago rare coin dealer seriously asked me: "Why do you collect that (expletive deleted) ?" Looking him right in the eyes I replied: "Where else are you going to find an R-6 American coin for less than \$100.00?" Since then, his staff members have been most considerate in telephoning me whenever Connecticut pieces or other "Colonials" arrive at the shop, and while I have not made any Connecticut converts there, they do agree with what Q. David Bowers has pointed out: "A \$100 colonial coin generally is much scarcer than a \$100 Buffalo nickel." And, as far as I am concerned, it is quite a bit more interesting and historical.

Photo credits: Date elements by James A. Simek;
all others from CNL Photofile



GENERAL SUMMARY:

The tabular listing below summarizes the quantities by grade for each of the specimens considered in this survey. On the following fold-out sheet (Table 2, page 712) is a listing of individual specimens held by collectors and institutions. To maintain anonymity each collection has been assigned a reference letter and each specimen a reference number. Note that in some cases individual collections hold more than one specimen of each variety.

→ Grade ↓ VARIETY	Fair	About Good	Good	VG- G-VG G/VG G+	VG	Abt.Fine VG+ VG/F VG-F	Fine	VF- Fine + F/VF F-VF	VF	VF+ VF/XF	XF
6-K of 1786			2	9		3	4		2		
9-R of 1787	1	1	3	2	4	2	2	1	4	1	1
12-Q of 1787	1		1	4	5		3	2	3	2	1

TABLE 1: QUANTITIES by GRADE

TABLE 2: COLLECTIONS & REMARKS by VARIETY

COLLECTION	6-K of 1786		9-R of 1787		12-Q of 1787	
	COIN # & GRADE	DATE ACQUIRED & COMMENTS	COIN # & GRADE	DATE ACQUIRED & COMMENTS	COIN # & GRADE	DATE ACQUIRED & COMMENTS
A	#1 VG	Porous, weakly struck date. Acquired 1931 ex. Canfield & New Jersey Historical Society (NJHS).	#1 Fine	Hole at 12:00, otherwise decent. Ex. New Jersey Historical Society. 1931	#1 VF	Cracked flan in two places, some lamination, but overall strong coin. Ex. New Jersey Historical Society. 1931
	#2 VG	Gash on head, weakly struck date. Acquired 1931, ex. Canfield & NJHS.	#2 VF	Slight corrosion, but very nice overall condition. Pedigree unknown.	#2 Good	Worn, weakly struck at right obverse, some corrosion. Pedigree unknown.
B	#3 VG/F	1966	#3 Good	1978	#3 VF	"I have owned three others including an AU sold in 1964 and a VF sold in 1967."
C	#4 VG-	Ex. Hall, Newcomer & E.H.R.Green. 1940	#4 VG	1935	#4 Fine	Ex. Hall, Newcomer and E.H.R.Green. 1940
			#5 Good	1935		
D	#5 Fine	Weak date. Discovered in box of common copper pieces.	#6 G/VG	Found in dealer's box of common coppers. "I feel this is a very scarce variety in any grade above VG. 1974	#5 F/VF	Date area not well struck. 1973
	#6 G/VG	Same as #5 above.				
E	#7 Abt.Fine		#7 VG	1967	#6 Fair	1967
F	#8 VG	Uneven strike. 86 in date is not discernable.	#8 VG/F	1977	#7 VF+	ONN in CONNEC obliterated from die failure, scattered planchet defects, but very sharp overdate. 1976
			#9 VF	1977	#8 VF+	Similar to above. 1978
			#10 VF	Double struck. 1978		
G	#9 VF	1968	#11 XF	1938	#9 VF	1937
	#10 Fine	1974	#12 Fine	1956	#10 VG	1940
					#11 VG	1945
H	#11 Fine	1968	none		#12 Fine	1968
I	none		#13 VF/XF	Ex.Stepney Hoard, Craig and EAC 1975 Sale.		
J	#12 VF	1977. Well struck with full date. Collector has owned 3 specimens in past 21 years and found few above Fine.	#14 VG	1955	none	
K	#13 Good	1958	none		#13 Fine	"I have seen very few above Fine." 1974
L	#14 VG	Good color, date not fully on planchet.	#15 VF-	A very nice coin with glossy surfaces and clean overdate. 1977	none	
M	#15 G-VG	Weak at 86 in date and weak on Liberty's skirt. 1959	#16 VG/F	Die bulge on and above 87 of date. 1959	#14 VG	Ex. Norweb. 1954
					#15 VG	ONN very weak, reverse die break from edge through B. 1960
					#16 G-VG	ONN weak, reverse has several die breaks including one from edge across B to shield. 1952
N	#16 VG+	Weak 86, strong dashes at Liberty's foot. 1977	#17 G/VG	Sharp overdate. 1977	#17 VG	Major planchet crack at 3:00 of obverse. Excellent, clear and sharp date. 1977
					#18 Fine+	Ex. Breen III. 1978
O	#17 VG	Weak date.	#18 AG	Honest wear and plenty of it, but very sharp overdate.	#19 G-VG	
			#19 VG	Two obverse planchet defects, but very sharp overdate.		
P	#18 Good		none		#20 G-VG	1968
Q	#19 VG					
	none		#20 Fair		#21 G-VG	
R			#21 Good			
			#22 VF			
	#20 Fine	Ex. Henry Miller collection. Miller plate coin.	none		#22 XF	Ex. Ellsworth collection.

"FINGERPRINTING" NEW JERSEY COPPER COINS by ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETRY



CAMDEN COLLEGE OF ARTS AND SCIENCES
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(TN-91)

● ● Harold A. Frey, S. A. Katz*, Michael Pidotella and Joseph Sowers ● ●

ABSTRACT

The Articles of Confederation allowed the states to produce their own coinage. Consequently, the New Jersey Continental Congress granted authority to several individuals for the striking of some 3 million coppers. Various mints operated under State Charters from 1786 to 1788. Numismatic experts are able, in most cases, to identify the products of the various mints on the basis of physical characteristics. Our interest in these coins was to attempt correlations between their trace element contents and their respective origins. Energy dispersive x-ray fluorescence spectrometry was employed as the technique for the determination of the trace element contents of the coins. An Americium-241 exciter and a Ge(Li) detector coupled to a 1024 channel analyzer were used to collect the x-ray spectra. Data reduction was by computer program. On the basis of As:Cu, Ag:Cu, and Sb:Cu ratios, each mint appears to have used several different sources of copper. Good agreement between specimens reported to be the same was obtained in some cases. Specimens showing abnormal trace element ratios were identified as overstrikes of earlier English coppers.

"The Articles of Confederation, adopted July 9, 1778, provided that Congress should have the sole right to regulate the alloy and value of coin struck by its own authority or by that of the respective states.

Each state, therefore, had the right to coin money, but Congress served as the regulating authority. New Hampshire was the first state to consider coinage, but few if any coins were placed in circulation. The only specimens known bear the date 1776.

Vermont, Connecticut, and New Jersey granted coining privileges to companies or individuals. Massachusetts erected its own mint in which copper coins were produced. A number of interesting varieties of these state issues, most of which were struck in fairly large quantities, can still be easily acquired, and form the basis for many present day collections of early American coins." (1)

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"On June 1, 1786, the New Jersey Colonial legislature granted to Thomas Goadsby, Albion Cox and Walter Mould authority to coin some three million coppers weighing six pennyweight and six grains apiece, and not later than June 1788, on condition that they deliver to the Treasurer of the State, 'one-tenth part of the full sum they shall strike and coin.' in quarterly installments. These coins were to pass current at 15 to the shilling.

In an operation of this kind, the contractors purchased the metal and assumed all expenses of coining. The difference between these expenses and the total face value of the coins represented the profit.

Later Goadsby and Cox asked authority to coin two-thirds of the total independently. Their petition was granted November 22, 1787. Mould was known to have produced his coins at Morristown, while Cox (and probably Goadsby) operated in Elizabethtown."(2)

Shortly thereafter, Cox and Goadsby moved their operation to Rahway with the financial backing of Matthias Ogden. Their Elizabethtown mint was forced to close for non-payment of wages to the die maker. Goadsby left the Rahway site and was never heard from again. Cox fled to England to avoid a jail term, and he returned in 1796 to become the First Assayer of the Federal Mint in Philadelphia.

Other mints produced New Jersey coins, but these mints were not sanctioned by the State. For the most part, these unofficial mints worked as sub-contractors for those holding State charters. The other mints producing New Jersey coins included the Wyon Mint in England, James Bailey's Mint in New York City, Hatfield's Mint near Elizabethtown as well as many independent coiners at Machin Mills near Newburgh, New York.

While our contemporary numismatic experts are able to identify the products of the various mints on the basis of physical appearance, our interest in these coins was to attempt correlations between their trace element contents and their respective origins. "Fingerprinting" on the basis of trace element contents has been employed in archaeology and forensic science with much success, and the authenticity of numismatic specimens has been established in this manner. (3)

Both neutron activation analysis and x-ray fluorescence spectrometry are well suited to the determination of trace elements in a wide variety of matrices. To avoid the problems associated with residual radioactivity in the coins, x-ray fluorescence was chosen as the technique for the determination of trace element levels in the coins.

The energy dispersive x-ray fluorescent spectrum was measured for each coin using a 100 mCi²⁴¹Am exciter in a torroidal configuration and a lithium-drifted germanium detector coupled to a 1024 channel analyzer. The coins were supported

over the exciter with "MILLIPORE" filters. The spectrum of each coin was recorded for 40,000 seconds live time, and blanks were similarly recorded with the "MILLIPORE" filters in place. The spectra stored in the multi-channel analyzer were recorded via a high-speed printer.

No standards were available for the absolute determination of trace element levels. Consequently, trace element levels were evaluated relative to the 8.03 keV copper K_{α} activity. The K_{α} activities of iron (6.40 keV), arsenic (10.53 keV), silver (22.09 keV), tin (25.15 keV) and antimony (26.25 keV) as well as the K_{β} for copper (8.87 keV) were calculated as the ratio of the respective activities to the K_{α} activity. These calculations were performed by a computer program which first integrated the area under each x-ray peak, subtracted the background as measured for the blanks and then took the ratio of all peaks relative to the K_{α} peak. The resulting values are summarized in Table 1.

TABLE 1.

Relative X-Ray Intensities for Iron, Arsenic, Silver, Tin and Antimony in New Jersey Coins

Maris Number	Date	CuK_{β}/CuK_{α}	$FeK_{\alpha}/CuK_{\alpha}$ $\times 10^4$	$AsK_{\alpha}/CuK_{\alpha}$ $\times 10^4$	$AgK_{\alpha}/CuK_{\alpha}$ $\times 10^4$	$SnK_{\alpha}/CuK_{\alpha}$ $\times 10^4$	$SbK_{\alpha}/CuK_{\alpha}$ $\times 10^4$
17-b	1786	0.159	56	10	86	nd	73
34-J	1787	0.159	nd	16	112	34	130
54-k	1787	0.159	nd	53	30	nd	55
56-n	1787	0.160	57	10	80	nd	88
56-n	1787	0.154	45	13	79	nd	73
56-n	1787	0.159	99	40	47	53	25
62-q	1787	0.163	nd	36	46	nd	24
48-g	1787	0.163	nd	30	36	85	251
75-bb	1788	0.162	55	44	45	nd	31
75-bb	1788	0.159	54	59	42	nd	29
78-dd	1788	0.193	76	9	58	130	49
50-f	1788	0.137	nd	56	46	70	130

nd = no x-ray peak was identified by the computer program

Some 150 different varieties of New Jersey cents have been identified on the basis of their physical characteristics. All show a horse head over a plow on the obverse and bear the dates 1786, 1787 or 1788. The legend NOVA CAESAREA also appears on the obverse. A United States shield with thirteen vertical stripes and the legend E PLURIBUS UNUM appears on the reverse of all New Jersey cents. The coins are categorized on the basis of the direction in which the horse head faces (HL: head left, or HR: head right), the type of plow (high, or low), the size of the planchet, the size of the shield, etc. Maris (4) has assigned a number to each different obverse and a letter or letters to each different reverse to produce a classification system for the many varieties of New Jersey cents.

William T. Anton (5) and Walter H. Breen (6) have studied many of the coins we examined by x-ray fluorescence spectrometry. From their independent physical examinations of these coins, they have made specific assignments to each coin regarding the mint from which it came: Rahway, Elizabethtown, James Bailey, Machin Mills or Morristown. Anton's and Breen's assignments are summarized in Table 2.

TABLE 2.

Anton's and Breen's Assignments of Mints for New Jersey Cents

Maris Number	overstrike	Anton's Assignment	Breen's Assignment
17-b	yes	Elizabethtown	Rahway
34-J	no	Elizabethtown	Elizabethtown
54-k	no	not designated by either	
56-n	yes	Elizabethtown	Machin's Mills
56-n	yes	"	"
56-n	no	"	"
62-q	no	Morristown	Machin's Mills
48-g	no	Rahway	Rahway
75-bb	no	Elizabethtown	John Bailey
75-bb	no	"	"
78-dd	no	"	"
50-f	no	Rahway	Rahway

The data in Table 1 clearly differentiate between the two overstruck 56-n coins and the virgin 56-n coin. Interestingly, the overstruck 17-b New Jersey cent has essentially the same composition as the overstruck 56-n coins. It is possible that all three over-struck coins have a common source.

The scarcity of raw materials and the pressure of meeting the delivery deadlines forced the minters to use any source of copper available. Overstriking of other coins was popular when the face value of the overstruck copper was less than that of the resultant coin. The most frequently over-struck coins were the Vermont coppers, the Connecticut coppers and the English halfpenny. The consistent trace element ratios of the overstruck coins we examined leads us to suggest they were originally English halfpennies rather than coppers from Vermont or Connecticut.

That the two 75-bb New Jersey cents have similar trace element ratios would indicate that they came from a small mint where the copper supply was more or less homogenous. Hence, we would attribute these specimens to the John Bailey Mint in New York rather than the larger operation in Elizabethtown. In this respect we would support Breen's assignment rather than Anton's.

That many of the New Jersey cents listed in Table 1 show no similarities in trace element contents reflects the large variety of copper sources used to produce the coins and the several mints in which the coins were struck. Given these conditions, variations in trace element composition are to be expected.

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